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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/779,982	02/17/2004	Gary Williams	200315828-1	1323
22879	7590	10/13/2005		
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			EXAMINER LE, THANH TAM T	
			ART UNIT	PAPER NUMBER
			2839	

DATE MAILED: 10/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/779,982

Applicant(s)

WILLIAMS ET AL.

Examiner

Thanh-Tam T. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 01 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 21-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. The RCE filed 07/01/05 is acknowledged.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 21-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bellinghausen et al. (6,616,461) in view of Kelly et al. (6,011,319).

Regarding claims 21, 26 and 30, Bellinghausen et al., figure 4, disclose an electronic system comprising :

- a first circuit board (8, since a plastic body 8 is comprising a bridge rectifier (column 2, lines 3-6) supporting a plurality of blade elements (10 and 14) each including respective electronic circuitry (column 3, lines 3-10);
- a second circuit board (22, since a conductor is located within the body of 22, column 4, lines 12-19);
- the first circuit board being disposed on a first side of the second circuit board;

- the second circuit board comprising a plurality of slots (50-53) and the plurality of blade elements are coupled through the slots and engage connectors (32) disposed on a second side of the second circuit board; and
- at least one heat sink attached to the first circuit board (column 3, lines 26-34) and contacting electronic components (conductors) on the second circuit board.

Bellinghausen et al. disclose the claimed invention as described above except for power and control signals distributed by the second circuit board.

Kelly et al., figure 15A, disclose an integrated circuit assembly for power and electronics having a substrate (not labeled) comprises circuit assembly combines power and electronic control circuits (Kelly et al., column 4, lines 66-67). It would have been obvious to modify Bellinghausen et al. to have the circuit assembly, as taught by Kelly et al., in order to produce and minimizes package size (Kelly et al., column 5, lines 1-3).

Regarding claim 30, in absence of any showing criticality of the applicant, to form the control signals are bi-directional control signals would have been obvious of modification since such change solves no stated problem.

Regarding claims 22, 27 and 31, the first circuit board comprising stops structures (12 and 16) for maintaining a predetermined distance between the first and second circuit boards (when the contacts 12 and 16 engage with 32, it will have a distance between the circuit boards).

Regarding claims 23, 28 and 32, each blade element comprising a plurality of

contacts (each contact having four surfaces with four contacts) to receive power and control signals through a respective connector (32) of the second circuit board.

Regarding claims 24, 29 and 33, a locking mechanism to maintain a physical coupling between the first and second circuit board (column 4, lines 63-67).

Regarding claims 25 and 34, the locking mechanism is a latch.

### ***Response to Arguments***

4. Applicant's arguments with respect to claims 21, 26 and 30 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh-Tam T. Le whose telephone number is 571-272-2094. The examiner can normally be reached on 7:30-5:00.

6. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TC Patel can be reached on 571-272-2098. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'T. Le', with a horizontal line drawn underneath it.

Thanh-Tam T. Le  
Primary Examiner  
Art Unit 2839

TL.  
10/05/05.